

### **Battery Production: U.S.-Sweden Cooperation Coming Out of the Lab**

Research on modular lithium-ion battery technology, conducted at MIT and Uppsala University under Swedish scientist Christina Lampe –Onnerud, is being commercialized. Boston Power and Power Circle (Stockholm) are evaluating plant sites in both countries and Asia for large-scale modular lithium-ion battery production for a wide range of media, from cars to laptops, and for smart grids for wind and solar power production.

### **Swedes Use American Technology to Build World's Largest Biogas Liquefaction Facility**

Swedish firm Terracastus has moved from a pilot plan funded by DOE in the U.S. to a joint venture with Nordvästra Skånes Renhållnings AB to build the world's largest biogas liquefaction facility in Helsingborg, Sweden. Terracastus uses leased technology from Ohio firm Acirion. Acirion's liquefying process reduces the temperature of biogas to approximately -52 degrees Celsius upon which the carbon dioxide is converted into a liquid, and then used to "wash" the biogas. Helsingborg is converting city buses and vehicles to liquefied biogas.

### **U.S. and Sweden's Aid Agencies to Use Public Private Partnerships to Help the World Go Green**

The world's number one donor of government aid (US) and the number one donor in per capita terms (Sweden) are teaming up. On March 26 in Washington, the two countries' aid agencies will sign an agreement to give market loans and investment guarantees to the private sector for projects focused on climate, environment, agriculture and health.

### **As Sweden Vastly Expands Wind Power, GE Invests €50 million to Partner on Projects**

On March 25, GE announced plans to invest €340 million (\$455 million) in wind turbine manufacturing, engineering and service facilities in the UK, Norway, Germany and Sweden. By 2016, GE will invest €50 million (\$67 million) in Sweden, with plans for a design center, a demonstration unit in Gothenburg harbor, and joining the Chalmers Wind Energy Center in Gothenburg. Also in March, the Swedish government announced plans to construct 2,000 wind turbines to increase electricity production by 25 terawatt hours by 2020, and granted a permit for the largest ever wind turbine project in Sweden with up to 1,101 wind turbines in Piteå Municipality.

### **Sweden's Linnaeus University Brings District Heating to Northern Michigan University**

Northern Michigan University is building a district heating plant using biomass for heat and power, with technical aid from Linnaeus University in Växjö Sweden and the Swedish Energy Agency.

### **San Jose and Uppsala Plan to Cut Public Transit Emissions with Podcars**

The Swedish government wants to build a pioneer Podcar system in the near future. Swedish firm Vectus PRT (Personal Rapid Transport) recently built a test-track in Uppsala. Large-scale simulations of an area-wide PRT network were held in Gothenburg. Separately, San Jose California is on track to build the first Podcar system in the U.S., connecting sites to its airport. On October 27-29, San Jose will host an international Podcar conference organized by the International Institute of Sustainable Transportation, a U.S. non-profit which was initiated by the Swedish Institute for Sustainable Transportation.

### **Swedish Clean Tech Company of the Year in Iowa**

Iowa State University, home of the Cyclones hockey team, has reduced its home rink's energy bill 43 per cent with the help of Malmö company Watreco. Selected as the Swedish Clean Tech Company of the Year in 2009 by an industry group, Watreco invented a device to remove oxygen from water, requiring less energy to turn water into ice.

### **Swedish- German Investment in Georgia Biomass Plant**

The German power company RWE and Swedish engineering firm BMC will together invest \$150 million in a wood pellet plant in Waycross, Georgia. The plant will export 750,000 tons of wood products annually, mostly to the European market.

### **Clean Tech in the Swedish Heartland**

Proof that solar can help even the darkest, most sun-starved, lands: In the middle of Sweden, the city of Jönköping has set up the largest solar array in the Nordics through a combination of government support and entrepreneurial initiative. The Swedish Energy Agency provides 60 per cent of the financing for solar projects on city buildings. The payback period for these solar installations is 6.5 to 7 years.

### **DOE Research Projects with Luleå University on Biofuels**

The National Renewable Energy Lab has approved funding for two research projects with Luleå University of Technology in Northern Sweden in March. The projects look at gasification and membrane separation to increase the alcohol content in biofuels.

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